

CLAIMS:

I claim:

1. A root growth barrier, comprising a layer of a root-tip-trapping material bonded to a layer of a root-impenetrable material.
2. The barrier of claim 1, wherein the root-impenetrable material is water-impenetrable.
3. The barrier of claim 1, wherein the root-tip-trapping material comprises greater than 10 root-tip-trapping elements per square inch.
4. The barrier of claim 1, wherein the root-tip-trapping material is a porous fabric.
5. The barrier of claim 4, wherein the porous fabric has a weight between 2 and 10 ounces per square yard.
6. The barrier of claim 5, wherein the porous fabric has a weight between 4 and 6 ounces per square yard.
7. The barrier of claim 4, wherein the porous fabric has openings between 1/16 and 1/4 inch.
8. The barrier of claim 4, wherein the porous fabric is a spun bonded, needle punched fabric.
9. The barrier of claim 8, wherein the porous fabric is selected from polyester, polypropylene or other olefin fiber.
10. The barrier of claim 4, wherein the porous fabric is a woven or knitted fabric.
11. The barrier of claim 10, wherein the porous fabric is degradable.

12. The barrier of claim 11, wherein the porous fabric is cotton.
13. The barrier of claim 4, wherein the porous fabric is opaque.
14. The barrier of claim 13, wherein the porous fabric is black or gray.
15. The barrier of claim 1, wherein the root-tip-trapping material is bonded onto the root-impenetrable material by a method selected from gluing, laminating and combinations thereof.
16. The barrier of claim 1, wherein the root-impenetrable material is comprised of a plurality of layers.
17. The barrier of claim 1, wherein the root-impenetrable material is reflective.
18. The barrier of claim 1, wherein the root-impenetrable material is a polymer sheet.
19. The barrier of claim 1, wherein the root-impenetrable material is selected from polyethylene and polypropylene.
20. The barrier of claim 1, wherein the root-impenetrable material is metal.
21. The barrier of claim 1, wherein the root-impenetrable material is a metal foil.
22. The barrier of claim 1, wherein the root-impenetrable material is aluminum foil.
23. The barrier of claim 1, wherein the root-impenetrable layer is pervious to UV radiation.
24. The barrier of claim 18, wherein root-impenetrable material is white.

25. The barrier of claim 1, wherein the root-impenetrable layer has a thickness between 2 and 10 mils.
26. The barrier of claim 1, wherein the root-impenetrable layer has a thickness between 3 and 5 mils.
27. The barrier of claim 1, wherein the root-impenetrable material is biodegradable.
28. The barrier of claim 27, wherein the biodegradable material is selected from wood, fiber, starch, polyhydroxyalkanoates, polycaprolactone, polylactide aliphatic copolymer, polylactide, aliphatic polyester, an aliphatic-aromatic copolymer, and combinations thereof.
29. An apparatus, comprising:
a root-impenetrable container for growing a plant; and
a root-tip-trapping material bonded to an inner wall of the container.
30. The apparatus of claim 29, wherein the container is formed into a shape selected from cylinders, squares, rectangles, cubes, blocks, hexagons, octagons, ovals, pentagons, triangles and circles.
31. The apparatus of claim 29, wherein the container has a diameter between 2 and 96 inches.
32. The apparatus of claim 29, wherein the container has a diameter between 5 and 60 inches.
33. The apparatus of claim 29, wherein the root-tip-trapping material is a spun bonded, needle punched fabric.
34. The apparatus of claim 33, wherein the fabric has a density between 2 and 10 ounces per square yard.

35. The apparatus of claim 33, wherein the fabric has a density between 4 and 6 ounces per square yard.
36. The apparatus of claim 29, wherein the root-impenetrable container comprises polyethylene and the root-tip-trapping material comprises spun bonded fabric.
37. The apparatus of claim 36, wherein the polyethylene has a thickness between 2 and 10 mils.
38. The apparatus of claim 36, wherein the polyethylene has a thickness between 3 and 5 mils.
39. The apparatus of claim 36, wherein the polyethylene contains additives.
40. The apparatus of claim 39, wherein the additives comprise UV inhibitors.
41. The apparatus of claim 29, wherein the fabric is black or grey.
42. The apparatus of claim 29, wherein the root-tip-trapping material is a woven or knitted fabric.
43. The apparatus of claim 29, wherein the container is assembled by sewing or stapling.
44. The apparatus of claim 33, wherein the container is a grow-bag or in-ground container.
45. The apparatus of claim 33, wherein the container is a production pot in pot-in-pot production.
46. A method of growing a plant in a pot comprising the steps of:
disposing a bilayer root growth barrier consisting essentially of a root-tip-trapping inner material bonded to a root-impenetrable material;

disposing a growth medium adjacent to the root growth barrier; and
adding a plant to the growth medium.

47. A method of growing a plant in-ground, comprising the steps of:
placing growth medium in a container comprising a bilayer consisting essentially of a biodegradable root-impenetrable outer material bonded to an inner root-penetrable material; and
adding a plant to the growth medium.
48. A root growth barrier, consisting essentially of:
a layer of a root-tip-trapping material bonded to a layer of a root-impenetrable material .
49. A root growth barrier, comprising:
a polymer sheet having a surface bonded to a porous fabric.
50. The barrier of claim 49, wherein the porous fabric has a weight between 4 and 6 ounces per square yard.
51. The barrier of claim 49, wherein the porous fabric has openings between 1/16 and 1/4 of an inch.
52. The barrier of claim 49, wherein the porous fabric is selected from spun bonded and needle punched fabric, woven fabric, and knitted fabric.
53. The barrier of claim 49, wherein the porous fabric is selected from polyester, polypropylene and cotton.
54. The barrier of claim 49, wherein the polymer sheet is white and the porous fabric is black.
55. The barrier of claim 49, wherein the porous fabric is bonded onto the polyethylene sheet by a method selected from gluing, laminating and combinations thereof.

56. The barrier of claim 49, wherein the polyethylene sheet has a thickness between 2 and 10 mils.
57. A root growth barrier, comprising:
a polyethylene sheet; and
a porous fabric layer bonded to a surface of the polyethylene sheet, wherein the porous fabric layer is selected from spun bonded and needle punched fabric, woven fabric, and knitted fabric.
58. The barrier of claim 57, wherein the polyethylene sheet is white and the porous fabric layer is black.
59. The barrier of claim 57, wherein the porous fabric layer is bonded onto the polyethylene sheet by a method selected from gluing, laminating and combinations thereof.
60. The barrier of claim 57, wherein the polyethylene sheet has a thickness between 2 and 10 mils.
61. The barrier of claim 57, wherein the porous fabric layer has a weight between 2 and 10 ounces per square yard.
62. The barrier of claim 57, wherein the porous fabric layer has a weight between 4 and 6 ounces per square yard.
63. The barrier of claim 1, wherein the root-tip-trapping layer comprises a plurality of strata.
64. The barrier of claim 25, wherein the root-impenetrable material is water-impenetrable.
65. The barrier of claim 1, wherein the root-tip-trapping material comprises greater than 100 root-tip-trapping elements per square inch.